15-DAY EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
CALIFORNIA BUILDING STANDARDS COMMISSION (CBSC)

REGARDING ADOPTION OF AMENDMENTS TO 2007 CALIFORNIA BUILDING STANDARDS CODE, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR), PARTS 2, 3, 4, 5 and 6 IN TITLE 24, CCR, PART 11, CALIFORNIA GREEN BUILDING STANDARDS CODE

Legend for Express Terms:

1. **New California amendment (CA):** California language will appear underlined.
2. **Amended, adopted, or repealed language**: Amended, adopted, or repealed language will appear in double underline and ~~double strikeout~~.
3. **Rationale:** The justification for the change is shown after each section or series of related changes.
4. **Notation**: Authority and reference citations are provided at the end of each chapter.

CHAPTER 1 ADMINISTRATION

SECTION 101
GENERAL

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101.7 City, county, or city and county amendments, additions or deletions. This code does not limit the authority of city, county, or city and county governments to make necessary changes to the provisions contained in this code pursuant to Section 101.7.1. The effective date of amendments, additions, or deletions to this code of cities, counties, or city and counties filed pursuant to Section 101.8.1 shall be the date on which it is filed ~~with the CBSC~~. However, in no case shall the amendments, additions or deletions to this code be effective any sooner than the effective date of this code.

. . .

101.8 Alternate materials, designs and methods of construction ~~and equipment~~. The provisions of this code are not intended to prevent the use of any alternate material, appliance, installation, device, arrangement, method, design or method of construction not specifically prescribed by this code. Consideration and compliance provisions for occupancies regulated by adopting state agencies are found in the sections listed below.

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Recommendation:
Based on criteria 1 and 6, CBSC proposes to delete these words for consistency with other sections within this chapter and among the Chapters 1 in other parts of CCR, Title 24.

Rationale:
The amendments do not have regulatory effect.

SECTION 102
CONSTRUCTION DOCUMENTS AND INSTALLATION VERIFICATION

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102.3 Verification. Documentation of conformance for applicable green building measures shall be provided to the enforcing agency. ~~Third-party verification or other special documentation shall be provided as specified in this code.~~ Alternate methods of documentation shall be acceptable when the enforcing agency finds that the proposed alternate documentation is satisfactory to demonstrate substantial conformance with the intent of the proposed green building measure.

Recommendation:
Based on criteria 1 and 6, CBSC proposes to withdraw this sentence.

Rationale:

The first second sentence's intent was to draw attention to certain provisions that may require special expertise. However, it does not seem necessary to the meaning of the section. A state agency may withdraw a proposed code change.

Notation:
Authority – Health and Safety Code Sections 18934.5 and 18938 (b).
Reference – Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

CHAPTER 5 ENERGY EFFICIENCY

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SECTION 502
DEFINITIONS

502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

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ENERGY STAR. A joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. ENERGY STAR is a voluntary ~~labeling~~ program designed to identify and promote energy-efficient products and practices ~~to reduce greenhouse gas emissions~~.

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Recommendation:

Based on criteria 1 and 6, CBSC proposes coordinate the definition of ENERGY STAR with that on the Energy Star website to provide consistency for the code user.

Rationale:

The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur. The amendment does not change the regulations proposed in Chapter 5.

TIME DEPENDENT VALUATION (TDV) ENERGY. The time varying energy caused to be used by the building to provide space conditioning and water heating and for specified buildings lighting. TDV energy accounts for the energy cost used at the building site and consumed in producing and in delivering energy to a site, including, but not limited to, power generation, transmission and distribution losses.

. . .

Recommendation:

Based on criteria 1 and 6, CBSC proposes to replace the second word "energy" in the last sentence to read "energy cost" to provide greater clarity to the code user.

Rationale:

The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

SECTION 511
RENEWABLE ENERGY

511.1 On-site renewable energy. Use on-site renewable energy sources such as solar, wind, geothermal, low-impact hydro, biomass and bio-gas for at least 1% of the electric power calculated as the product of the building service voltage and the amperage specified by the electrical service overcurrent protection device rating or 1kW~~.~~ (whichever is greater), in addition to the electrical demand required to meet 1% of the natural gas and propane use. The building project's electrical service overcurrent protection device rating shall be calculated in accordance with the 2007 California Electrical Code. Natural gas or propane use is calculated in accordance with the 2007 California Plumbing Code.

511.1.1 Documentation. Using a Calculation Method approved by the California Energy Commission, ~~C~~ calculate the renewable on-site energy system to meet the requirements of Section 511.1, expressed in kW. ~~cost savings as a percentage of estimated local utility rates for conventional fuel types.~~ Factor in net-metering, if offered by local utility, on an annual basis.

. . .

Recommendation:

Based on criteria 1 and 6, CBSC proposes to clarify for the code user that propane and natural gas used to generate electricity should be accounted for in the calculation. CBSC further proposes to coordinate the documentation requirements with the standard.

Rationale:

CBSC received a comment that all energy services, not just electrical need to be taken into consideration when calculating the renewable energy requirements, and the California Energy Commission concurred. The amendments are sufficiently related to the original proposal for the public to have been adequately noticed that the changes might occur.

Notation:
Authority – Health and Safety Code Sections 18934.5 and 18938 (b).
Reference – Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

CHAPTER 6 WATER EFFICIENCY AND CONSERVATION

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TABLE 603.1
WATER USE BASELINE[5]

Fixture Type	Flow-rate[2]	Duration	Daily uses	Occupants[3, 4]
Showerheads	2.5 gpm @ 80 psi	8 min.	1	X
Showerheads Residential	2.5 gpm @ 80 psi	8 min.	1	X
Lavatory Faucets Residential	2.2 gpm @ 60 psi	.25 min.	3	X
Kitchen Faucets	2.2 gpm @ 60 psi	4 min.	1	X
Replacement Aerators	2.2 gpm @ 60 psi			X
Wash Fountains	2.2 [rim space (in.) / 20 gpm @ 60 psi]			X
Metering Faucets	0.25 gallons/cycle	.25 min.	3	X
Metering Faucets for Wash Fountains	.25 [rim space (in.) / 20 gpm @ 60 psi]	.25 min.		X
Gravity tank type Water Closets	1.6 gallons/flush	1 flush	1 male[1] 3 female	X
Flushometer Tank Water Closets	1.6 gallons/flush	1 flush	1 male[1] 3 female	X
Flushometer Valve Water Closets	1.6 gallons/flush	1 flush	1 male[1] 3 female	X
Electromechanical Hydraulic Water Closets	1.6 gallons/flush	1 flush	1 male[1] 3 female	X
~~Blowout Water Closets~~	~~3.5 gallons/flush~~	~~1 flush~~	~~1 male[1] 3 female~~	~~X~~
Urinals	1.0 gallons/flush	1 flush	2 male	X

Fixture "Water Use" = Flow rate x Duration x Occupants x Daily uses

[1] Except for low-rise residential occupancies the daily use number shall be increased to three if urinals are not installed in the room.

[2] The Flow-rate is from the CEC Appliance Efficiency Standards, Title 20 California Code of Regulations; where a conflict occurs, the CEC standards shall apply.

[3] For low rise residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.

[4] For non-residential occupancies, refer to Table A, Chapter 4, 2007 California Plumbing Code, for occupant load factors.

[5] Use Worksheet WS-1 to calculate base line water use.

TABLE 603.2
FIXTURE FLOW RATES

Fixture Type	Flow-rate	Maximum flow rate at 20% Reduction
Showerheads	2.5 gpm @ 80 psi	2 gpm @ 80 psi
Lavatory Faucets Residential	2.2 gpm @ 60 psi	1.8 gpm @ 60 psi

Kitchen Faucets	2.2 gpm @ 60 psi	1.8 gpm @ 60 psi
Wash Fountains	2.2 [rim space (in.) / 20 gpm @ 60 psi]	1.8 [rim space (in.) / 20 gpm @ 60 psi]
Metering Faucets	0.25 gallons/cycle	0.2 gallons/cycle
Metering Faucets for Wash Fountains	.25 [rim space (in.) / 20 gpm @ 60 psi]	.20 [rim space (in.) / 20 gpm @ 60 psi]
Gravity tank type Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Flushometer Tank Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Flushometer Valve Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
Electromechanical Hydraulic Water Closets	1.6 gallons/flush	1.28 gallons/flush[1]
~~Blowout Water Closets~~	~~3.5 gallons/flush~~	~~2.8 gallons/flush~~
Urinals	1.0 gallons/flush	.8 gallons/flush

[1] Includes **water closets with an** effective flush rate of 1.28 gallons or less when tested per ASME A112.19.2 and ASME A112.19.14.

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CHAPTER 11

WORKSHEET (WS-1)
BASELINE WATER USE

BASELINE WATER USE CALCULATION TABLE											
Fixture Type	**Quantity**		**Flow-rate (gpm)**		**Duration**		**Daily uses**		**Occupants[3, 4]**		**Gallons per day**
Showerheads		X	2.5	X	5 min.	X	1	X		=	
Showerheads Residential		X	2.5	X	8 min.	X	1	X		=	
Lavatory Faucets Residential		X	2.2	X	.25 min.	X	3	X		=	
Kitchen Faucets		X	2.2	X	4 min.	X	1	X		=	
Replacement Aerators		X	2.2	X		X		X		=	
Wash Fountains		X	2.2	X		X		X		=	
Metering Faucets		X	0.25	X	.25 min.	X	3	X		=	
Metering Faucets for Wash Fountains		X	2.2	X	.25 min.	X		X		=	
Gravity tank type Water Closets		X	1.6	X	1 flush	X	1 male[1] 3 female	X		=	
Flushometer Tank Water Closets		X	1.6	X	1 flush	X	1 male[1] 3 female	X		=	
Flushometer Valve Water Closets		X	1.6	X	1 flush	X	1 male[1] 3 female	X		=	
Electromechanical Hydraulic Water Closets		X	1.6	X	1 flush	X	1 male[1] 3 female	X		=	
~~Blowout Water Closets~~		~~X~~	~~3.5~~	~~X~~	~~1 flush~~	~~X~~	~~1 male[1] 3~~	~~X~~		~~=~~	

							~~female~~				
Urinals		X	1.0	X	1 flush	X	2 male	X			
Total daily baseline water use (BWU)										=	
(BWU) X .80 = Allowable water use											

[1] Except for low-rise residential occupancies the daily use number shall be increased to three if urinals are not installed in the room.
[2] The Flow-rate is from the CEC Appliance Efficiency Standards, Title 20 California Code of Regulations; where a conflict occurs, the CEC standards shall apply.
[3] For low-rise residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
[4] For non-residential occupancies, refer to Table A, Chapter 4, 2007 California Plumbing Code, for occupant load factors.

WORKSHEET (WS-2)
20% REDUCTION WATER USE CALCULATION TABLE

20% REDUCTION WATER USE CALCULATION TABLE											
Fixture Type	**Quantity**		**Flow-rate (gpm)**		**Duration**		**Daily uses**		**Occupants[3, 4]**		**Gallons per day**
Showerheads		X		X	5 min.	X	1	X		=	
Showerheads Residential		X		X	8 min.	X	1	X		=	
Lavatory Faucets Residential		X		X	25 min.	X	3	X		=	
Kitchen Faucets		X		X	4 min.	X	1	X		=	
Replacement Aerators		X		X		X		X		=	
Wash Fountains		X		X		X		X		=	
Metering Faucets		X		X	.25 min.	X	3	X		=	
Metering Faucets for Wash Fountains		X		X	.25 min.	X		X		=	
Gravity tank type Water Closets		X		X	1 flush	X	1 male[1] 3 female	X		=	
HET [5] High Efficiency Toilet		X	1.28	X	1 flush	X	1 male[1] 3 female	X		=	
Flushometer Tank Water Closets		X		X	1 flush	X	1 male[1] 3 female	X		=	
Flushometer Valve Water Closets		X		X	1 flush	X	1 male[1] 3 female	X		=	
Electromechanical Hydraulic Water Closets		X		X	1 flush	X	1 male[1] 3 female	X		=	
~~Blowout Water Closets~~		~~X~~		~~X~~	~~1 flush~~	~~X~~	~~1 male[1] 3 female~~	~~X~~		~~=~~	
Urinals		X		X	1 flush	X	2 male	X			

Urinals Non-Water Supplied		X	0.0	X	1 flush	X	2 male	X		=	
Proposed water use										=	
(BWU from GW-1) X .80 = Allowable water use											

[1] Except for low-rise residential occupancies the daily use number shall be increased to three if urinals are not installed in the room.
[2] The Flow-rate is from the CEC Appliance Efficiency Standards, Title 20 California Code of Regulations; where a conflict occurs, the CEC standards shall apply.
[3] For low-rise residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.
[4] For non-residential occupancies, refer to Table A, Chapter 4, 2007 California Plumbing Code, for occupant load factors.
[5] Includes w ~~W~~ater closet s with an effective flush rate of 1.28 gallons or less when tested per ASME A112.19.2 and ASME A112.19.14.

Recommendations:

1. Withdraw the provisions in the water use tables for Blowout Water Closets.
2. Based on criteria 1 and 6, CBSC proposes to amend the table to add a footnote to explain how to determine the occupant load factor for non-residential occupancies, and to coordinate footnotes 1 and 5 in Tables 603.2 and WS-2.

Rationale:

1. CBSC received a comment during the 45 day comment period requesting that blowout water closets be removed from the water use tables. Although these fixtures are not commonly used, CBSC accepted the comment and is proposing to remove blowout water closets from the table. However, CBSC does anticipate review of this removal for possible inclusion during the next code adoption cycle. A state agency may withdraw a proposed code change.
2. Footnote 4 was in the express terms reviewed and not disputed by the Green Building Code Advisory Committee. It was inadvertently lost when footnote number 5 was added to the footnotes for the 45-day express terms.
   Also, CBSC received a comment stating dual flush toilets are not included within its proposal. Dual flush water closets have two different flush volumes and are measured by "effective flush rate". A footnote with the reference to "effective flush rate" was in the Water Use Worksheet 2 in the 45-day proposal, so the change provides consistency between Table 603.2 and WS-2. The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

. . .

603.4 Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:

1. The installation of water-conserving fixtures (water closets, urinals) meeting the criteria established in sections 603.2 or 603.3 or ~~utilizing non-potable water systems (captured rainwater, graywater, and on-site or municipally treated wastewater (recycled water)~~.
2. ~~Treat wastewater on-site to tertiary standards.u~~ Utilizing non-potable water systems (captured rainwater, graywater, and ~~on-site or~~ municipally treated wastewater (recycled water),

. . .

Recommendation:

Based on criteria 1 and 2, CBSC proposes to strike "on site or" to conform to existing California laws and regulations.

Rationale:

CBSC received a comment that the California Department of Health Services (CDPH) currently allows only municipal conversion of wastewater to recycled water in Title 22, thus the change has no regulatory effect. In the next code development cycle, CBSC plans to engage CDPH, Department of Water Resources, the State Water Resources Control Board, and other stakeholders to move water efficiency building standards forward.

Notation:
Authority – Health and Safety Code Sections 18934.5 and 18938 (b).
Reference – Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

CHAPTER 7 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

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SECTION 708
CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

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708.3 Construction waste reduction of at least 50%. Recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent. Calculate the amount of materials diverted by weight or volume, but not by both.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.

Recommendation:

Based on criteria 1 and 6, CBSC proposes to add articles and a phrase to coordinate this section with other proposing agencies'.

Rationale:

The phrase "construction and demolition waste management ordinance" is used elsewhere in this section and its addition here does not have regulatory effect.

CHAPTER 8 ENVIRONMENTAL QUALITY

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SECTION 802
DEFINITIONS

. . .

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

Recommendation:

Based on criteria 1, 2 and 6, CBSC proposes to add a reference to more detailed definitions of VOCs currently in regulations of the Air Resources Board (ARB).

Rationale:

CBSC received a comment to reference the VOC, Low Vapor Pressure-VOC, and Reactive Organic Compound definitions used by the California Air Resources Board (ARB) in Tile 17, Section 94508 (a). CBSC agrees with a portion of the comment and is proposing to include a definition consistent with ARB and proposals by other state agencies. CBSC does not use the terms Low Vapor Pressure-VOC and Reactive Organic Compound in our proposed text and is not proposing to include a definition of those terms. CBSC is proposing adoption of a common definition for VOC. The reference is editorial and does have regulatory effect.

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SECTION 804
POLLUTANT CONTROL

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804.2 IAQ post-construction. After construction ends, with all interior finishes installed, ~~a building flush-out shall be performed by one of the following methods:~~ flush-out the building by supplying continuous ventilation with all air handling units at their maximum outdoor air rate for at least 14 days while maintaining an internal temperature of at least 60°F, and relative humidity no higher than 60%. Occupancy may start after 7 days, provided flush-out continues for the full 14 days. Do not "bake out" the building by increasing the temperature of the space. (If continuous ventilation is not possible, flush-out must total the equivalent of 14 days of maximum outdoor air.).

~~1. Supplying a total air volume of 14,000 cubic ft. of outdoor air per square ft. of floor area (4,300 cubic m. of outdoor air per square m. of floor area) while maintaining an internal minimum temperature of 60 ºF (15ºC) and relative humidity no higher than 60%.~~

~~2. If occupancy is desired prior to completion of the flush-out, the space is allowed to be occupied following delivery of a minimum of 3,500 cubic ft. of outdoor air per square ft. of floor area (1,100 cubic m. of outdoor air per square m. of floor area) to the space. Once a space is occupied, it shall be ventilated at a minimum rate of 0.30 cfm per square ft. (1.5 L/s per square m.) of outdoor air or the design minimum outdoor airflow rate determined in Title 24, Part 6, Section 121, whichever is greater. During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy. These conditions shall be maintained until a total of 14,000~~

~~cubic ft. of outdoor air per square ft. of floor area (4,300 cubic m. of outdoor air per square m. of floor area) has been delivered to the space.~~

~~**Exception.** If continuous mechanical ventilation is not possible, provide outside air equivalent to a 14,000 cubic ft. of outdoor air per square ft. of floor area (4,300 cubic m. of outdoor air per square m. of floor area) flush-out.~~

. . .

Recommendation:

Based on criteria 1 and 6, CBSC proposes to amend this section based on a comment from ARB, who noted that the previous sections did not specify a time period and thus an air flow rate, which could conceivably be too low for effective flush-out.

Rationale:

Because the amendment is sufficiently related to the original proposal that was brought to the California Building Standards Commission Code Advisory Committee, CBSC believes that the public has been adequately noticed that the change might occur. The committee had recommended that the section be amended to include a testing protocol, but ARB advised against this because testing is costly and a building flush-out should eliminate the need for almost all air quality testing.

804.4 Finish material pollutant control. Finish materials shall comply with Sections 804.4.1 through 804.4.4.

804.4.1 Adhesives ~~and sealants~~. Adhesives ~~and sealants~~ used on the project shall meet the requirements of the following standards.

1. Adhesives, adhesive bonding primers, adhesive primers, ~~sealants and sealant primers~~ shall comply with Table 804.4.1.
2. Aerosol adhesives shall meet the requirements of California Code of Regulations, Title 17, commencing with Section 94507, http://ccr.oal.ca.gov/.

Recommendation:

Based on criteria 1 and 6, CBSC proposes to delete the references to sealants.

Rationale:

ARB has commented that Table 804.4.1 does not include sealants. CBSC believes that to include a new table for sealants or include additional requirements would require an additional 45 day comment period and review by the California Building Standards Commission Code Advisory Committee. CBSC will work with ARB and other stakeholders to study provisions for sealants in the next code cycle. The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

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804.4.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of ~~Section~~ Table 804.~~1~~ 4.1: ~~VOC limit of 50 grams per liter (less water and less exempt compounds).~~

Rationale:

CBSC received a comment that suggested the reference to Section 804.1.1 was not correct and that a typographical error also appeared in this section. Upon review, CBSC determined that the comment was correct and has proposed to remove the typographical error and correct the section reference. The changes do not have regulatory effect.

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804.4.4.1 Early compliance. Where complying product is readily available for non-residential occupancies, meet Phase 2 requirements before the compliance dates indicated in Table 804.4.

Recommendation:

Based on criteria 5 and 6, CBSC proposes to add the word “readily” on the recommendation of ARB to provide clarity to the code user.

Rationale:

ARB commented that stating “readily available” minimizes the chance of obtaining costly product with higher embodied energy from overseas. The amendment merely provides clarity and is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

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804.4.4 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in Table 804.4.4

~~**804.4.4.2 Agrifiber products.** Agrifiber products shall contain no added urea-formaldehyde resins.~~

~~**804.4.4.3 Adhesives.** Adhesives used to fabricate composite wood and agrifiber assemblies shall contain no urea-formaldehyde resins.~~

804.4.4.4 Documentation. Verification of compliance with this section shall be provided ~~at the~~ as requested by ~~of~~ the enforcing agency. Documentation shall include at least one of the following.

1. ~~Mill~~ Product certifications and specifications.
2. Chain of custody certifications.
3. Other methods acceptable to the enforcing agency.

TABLE 804.4.4
FORMALDEHYDE LIMITS[1]

Maximum formaldehyde emissions in parts per million.

	Phase 1		Phase 2			
Product	Jan 1, 2009	Jul 1, 2009	Jan 1, 2010	Jan 1, 2011	Jan 1, 2012	Jul 1, 2012
Hardwood Plywood Veneer Core	0.08		0.05			
Hardwood Plywood Composite Core		0.08				0.05
Particle Board	0.18			0.09		
Medium Density Fiberboard	0.21			0.11		
Thin Medium Density Fiberboard[2]	0.21				0.13	

~~[1]Thin medium density fiberboard has a maximum thickness of eight millimeters.~~

[1]values in this table are consistent with those developed by the California Air Resources Board. For additional information see California Code of Regulations, Title 17, Section 93120 through 93120.12.

[2]Thin medium density fiberboard has a maximum thickness of eight millimeters.

Recommendation:

Based on criteria 1, 2 and 6, CBSC proposes to amend the section to coordinate with ARB's regulations for formaldehyde limits.

Rationale:

CBSC received a comment from ARB stating the original proposal by CBSC could put agrifiber products at a competitive disadvantage. The comment also stated recent innovations in resin technology will serve to lower formaldehyde levels and that these products will be covered by both the maximum levels set in Table 804.4.4 if they meet the definition of products covered by the table. In addition, ARB commented that VOC limitations for composite wood products are accounted for in the limitation the entire product must meet and it is not necessary to include a specific limit for only one part of the composite product.

Further, CBSC received a comment stating the ARB Airborne Toxic Control Measure (ATCM) recently approved by the Office of Administrative Law should be included as a reference in Section 804.4.4 and cited as a reference in a footnote to Table 804.4.4. CBSC has included a footnote to the table to ensure the code user is aware that the maximum limits in Table 804.4.4 are consistent with the maximum values developed by the ARB.

The amendments are sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

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SECTION 807
ENVIRONMENTAL COMFORT

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807.1.1.2 Thermal comfort. Provide individual thermal comfort controls for at least 50% of the building occupants.

1. Occupants shall have control over at least one of the factors of air temperature, radiant temperature, air speed, and humidity as described in ASHRAE 55-2004.
2. Occupants inside 20 feet of the plane of and within 10 feet either side of operable windows can substitute windows to control thermal comfort. The areas of operable window must meet the requirements of Section 121 of the California Energy Code

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Recommendation:

Based on criterion 6, CBSC proposes to add the phrase "the plane of" to provide clarity to the code user regarding orientation of the subject occupants.

Rationale:

The amendment merely provides clarity and is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

Notation:
Authority – Health and Safety Code Sections 18934.5 and 18938 (b).
Reference – Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

CHAPTER 11

GREEN APPLICATION CHECKLIST (AC-BSC)

GREEN BUILDING MEASURE	REQUIRED	OPTIONAL	REQUIRED 3RD PARTY VERIFICATION
PLANNING AND DESIGN			
. . .			
ENERGY EFFICIENCY			
. . .			
RENEWABLE ENERGY (511)			
511.1 On-site renewable energy. Use on-site renewable energy for at least 1% of the electrical service overcurrent protection device rating calculated in accordance with the 2007 California Electrical Code, or 1KW, whichever is greater, in addition to the electrical demand required to meet 1% of natural gas and propane use calculated in accordance with the 2007 California Plumbing Code..		☐	
511.1.1 Documentation. Calculate renewable on-site energy ~~cost savings as a percentage of estimated local utility rates for conventional fuel types~~ system to meet the requirements of Section 511.1. Factor in net-metering, if offered by local utility, on an annual basis.		☐	
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WATER EFFICIENCY AND CONSERVATION			
. . .			
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY			
. . .			
CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING (708)			
. . .			
708.3 Construction waste. Recycle and/or salvage for reuse a minimum of 50% of non-hazardous construction and demolition debris or meet local ordinance, whichever is more stringent.		☐	

GREEN BUILDING MEASURE	REQUIRED	OPTIONAL	REQUIRED 3RD PARTY VERIFICATION
Exceptions: 1. Excavated soil and land-clearing debris. 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.			
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ENVIRONMENTAL QUALITY			
. . .			
POLLUTANT CONTROL (804)			
. . .			
804.2 IAQ post-construction. Flush out the building per Section 804.2.1~~(1)~~ prior to occupancy~~;~~ or~~,~~ ~~I~~ if the building is occupied. ~~If the building is occupied, per Section 804.2.1 (2).~~		☐	
. . .			
804.4 Finish material pollutant control. Finish materials shall comply with Sections 804.4.1 through 804.4.4. **804.4.1 Adhesives ~~and sealants~~.** Adhesives ~~and sealants~~ used on the project shall meet the requirements of the following standards. 1. Adhesives, adhesive bonding primers, and adhesive primers, ~~sealants and sealant primers~~ shall comply with Table 804.4.1. 2. Aerosol adhesives shall meet the requirements of California Code of Regulations, Title 17, commencing with Section 94507 . . . **804.4.3 Carpet systems.** All carpet installed in the building interior shall meet the testing and product requirements of one of the programs listed in Items 1 through 4 in 804.4.3. **804.4.3.1 Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program. **804.4.3.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of ~~Section 804.1.1~~ Table 804.4.1. **804.4.4 Composite wood products.** Hardwood plywood, particleboard, and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in Table 804.4.	☐	☐ ☐ ☐ ☐ ☐	

GREEN BUILDING MEASURE	REQUIRED	OPTIONAL	REQUIRED 3RD PARTY VERIFICATION
804.4.4.1 Early compliance. Where complying product is available for non-residential occupancies, meet Phase 2 requirements before the compliance dates indicated in Table 804.4.		☐	
~~**804.4.4.2 Agrifiber products.** Agrifiber products shall contain no added urea-formaldehyde resins.~~			
~~**804.4.4.3 Adhesives.** Adhesives used in on-site assembly shall contain no urea-formaldehyde resins.~~			
804.4.4.4 Documentation. Verification of compliance with this section shall be provided as ~~at the~~ requested ~~of~~ by the enforcing agency. Documentation shall include at least one of the following.			☐
1. ~~Mill~~ Product certifications and specifications.			☐
2. Chain of custody certifications.			☐
3. Other methods acceptable to the enforcing agency.			☐
. . .			

Notation:
Authority – Health and Safety Code Sections 18934.5 and 18938 (b).
Reference – Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

APPENDIX A COMMENTARY OF ADDITIONAL DESIGN CONSIDERATIONS

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SECTION A401
PLANNING AND DESIGN

. . .

A406.1.5.2.1 Electric vehicle supply wiring. For each space required in Table A406.1.5.2, provide one ~~conductive~~, 120 V~~AC~~ 20 ~~A~~amp and one 208/240 V 40 amp, grounded AC outlets or panel capacity and conduit installed for future outlets.

Table A406.1.5.2

Total Number of Parking Spaces[1]	Number of Required Spaces
1-50	1
51-200	2
201 and over	4

[1] In a parking garage, the total number of parking spaces is for each individual floor or level.

Recommendation:
1. Based on criteria 3 and 6, CBSC proposes to amend Section A406.1.5.2 to provide for an additional outlet of differing voltage.
2. In addition, based on criteria 1 and 6, CBSC proposes to amend the table to add a footnote to explain that electric vehicle charging stations shall be provided at each floor or level of a parking garage.

Rationale:
1. Electric vehicle technology is emerging to improve power storage, such as using lithium ion batteries which may require charging using 220 outlets. This amendment would accommodate a variety of plug-in electric vehicles, including some being developed for the 2009 market. The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

2. This language was in the express terms reviewed and not disputed by the Green Building Code Advisory Committee. It was inadvertently lost when CBSC formatted the provisions into a table for consistency with other code sections. The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

Notation:
Authority – Health and Safety Code Sections 18934.5 and 18938 (b).
Reference – Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.